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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,563

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Werner Kehl

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EXAMINER

SHEVIN, MARK L

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,563	Applicant(s) KEHL ET AL.	
	Examiner MARK L. SHEVIN	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/03/2005 and 09/06/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status

1. Claims 1-4, filed as a preliminary amendment on October 3rd, 2005, are pending.

Priority

2. Applicant's claim to foreign priority of European patent application 03008147.5, filed April 8th, 2003 is acknowledged but Applicants have not provided a copy of this priority document.

Election without Traverse

3. Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 26th, 2009.

Information Disclosure Statements

4. The information disclosure statements (IDS) submitted October 3rd, 2005 and September 6th, 2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner. Please refer to applicants' copies of the 1449 forms submitted herewith.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Joint Inventors

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over either of **Neutjens** (EP 0507411) or **Dunbar** (US 6,383,314) in view of **Thompson** (US 4,151,013).

Neutjens:

Neutjens discloses a method for the production of a flat, rolled semi-finished product with a composition belonging to the AA 5000 series of Al-Mg alloys (Abstract), wherein the aluminum alloys have contents of Mg, Mn, Cr, Si, Fe, Cu, Zn, Ti, Al, and other elements (p. 4, claim 1) as shown in the comparative table below.

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Although Ti is not mentioned by Neutjens, it can be assumed to be present at Ti: 0 – 0.05 as Neutjens taught that other elements may be presented up to a maximum of 0.05% each.

Neutjens teaches that during the rolling process a semi-finished product is subjected to at least one intermediate soft annealing between two cold rolling stages (p. 3, Table, sample B) and a final annealing – both in a batch furnace. The degree of deformation before the first intermediate soft annealing is at least 50% (p. 3, lines 24-25; 75%) and before the final soft annealing not more than 30% (p. 3, Table, Note 2, 15-20%).

The semi-finished product of Neutjens can be stretch-formed after the final soft annealing. This is disclosed on p. 2, lines 6-8, where it is stated that the supply condition "soft" relates to the condition following recrystallization annealing, which may sometimes be followed by a light post-treatment such as flattening. Flattening can also be considered stretching (elongation), since the dimension of a flattened product are larger by a certain percentage than the dimensions of a product before flattening.

Neutjens does not disclose that the semi-finished product is rolled out from an ingot and does not disclose the degree of stretch-forming of the semi-finished product as being 0.1 – 0.5%.

Dunbar:

Dunbar discloses a method for the production of a flat, rolled semi-finished product with a composition belong to the AA5000 series of Al-Mg alloys, where

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aluminum alloys have contents of Mg, Mn, Cr, Si, Fe, Cu, Zn, Ti, Al and other elements (col. 4, lines 4-26) as shown in the comparative table below.

Dunbar discloses that the semi-finished product is rolled off of an ingot (Fig. 1, ingot -> homogenization -> hot rolling; col. 3, lines 30-55) and that during the rolling process a semi-finished product is subjected to at least one intermediate soft annealing between two cold rolling stages (col. 3, lines 30 - 56; Fig 1) and a final annealing – both in a batch furnace (col. 3, lines 50-56, Fig. 1). The degree of deformation before the first intermediate soft annealing is at least 50% (col. 5, lines 50-52) and before the final soft annealing is 20 - 80% (col. 5, lines 10-15).

Dunbar does not disclose that his semi-finished product is stretch-formed by 0.1 to 0.5% after the final soft annealing (col. 5, lines 29-33).

Thompson:

Thompson discloses a method for the production of a flat, rolled semi-finished product with a composition belonging to the AA5000 series of Al-Mg alloys (Abstract), wherein the aluminium alloys have contents of Mg, Mn, Cr, Si, Fe, Cu, Zn, Ti, Al and other elements (col. 4, lines 6-16) as shown in the comparative table below.

Thompson discloses that the semi-finished product is rolled off of an ingot (col. 4, lines 31-34; cast into ingot form and hot rolling) and that during the rolling process a semi-finished product is subjected to at least one intermediate soft annealing between two cold rolling stages (col. 5, example No. 2) and a final annealing (col. 5, example No. 2, heat treat). The degree of deformation before the first intermediate soft annealing is at least 50% (col. 5, example No. 2, cold rolling a reroll gauge of about 0.156" to 0.070",

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which corresponds to a degree of deformation of about 55.1%). However, the degree of deformation before the final soft annealing was 52.9% (col. 5, example No. 2, cold rolling from 0.070" to 0.033" after annealing, which corresponds to a degree of deformation of about 52.9%; col. 4, lines 45-51). The semi-finished product was stretch-formed after the final soft annealing (heat treat) with a stretch leveler which was set to uniformly impart a permanent set along its length of about 0.5% along the length of the sheet (col. 5, lines 45-49) and serves to flatten the sheet (col. 3, lines 54-59).

Limitations of Claim 4	Neutjens	Dunbar	Thompson
Mg: 2 – 5	0.8 – 5.6	2 – 7	2 – 8
Mn: 0 – 0.5	0 – 1.0	0.2 – 1.5	0 – 0.5
Cr: 0 – 0.35	0 – 0.35	0 – 0.25	0 – 0.3
Si: 0 – 0.4	0 – 0.4	0 – 0.3	0 – 0.4
Fe: 0 – 0.4	Fe+Ni+Co: 0 – 0.75	0 – 0.4	0 – 0.5
Cu: 0 – 0.3	0 – 0.2	0 – 0.2 (other)	0 – 0.3
Zn: 0 – 0.3	0 – 0.25	0 – 1.8	0 – 0.25
Ti: 0 – 0.15	0 – 0.05 (other)	0 – 0.2 (other)	0 – 0.2
Others sum max: 0.15	0.15	0 – 2.0	0.15
Other individual max: 0.05	0.05	0 – 0.2	0.05
Al: Balance	balance	balance	balance
Semi-finished product is rolled out from an ingot	n/a (sheet)	yes	yes
... is subjected to at least one intermediate soft annealing (batch)	yes	yes	n/a (continuous heating)
Cold rolling before first annealing 50% and above	75%	50%+	55.1%
Cold rolling before final annealing: not more than 30%	15 – 20%	20 – 80%	40%
Stretch forming: 0.1	Flattening (n/a)	n/a	0.5

- 0.5%			
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Regarding claim 4, using Neutjens, it would have been obvious to one of ordinary skill in Al-Mg alloy sheet processing, at the time of the invention, to have modified the process of Neutjens to have rolled semi-finished products off of an ingot and to have stretch-formed the semi-finished product in the range of 0.1 - 0.5% as Thompson taught that it is well-known to produce a semi-finished product, such as a sheet (used by Neutjens) from an ingot (Thompson: col. 4, lines 31-34; cast into ingot form and hot rolling) and Thompson taught flattening his substantially similar Al-Mg semi-finished, cold-rolled sheet by stretching at about 0.5%, providing a reasonable expectation of success in achieving Neutjen's goal of flattening the Al-Mg sheet.

Using Dunbar, it would have been similarly obvious to one of ordinary skill in Al-Mg alloy sheet processing, at the time of the invention, to have modified the process of Dunbar to have stretch-formed the semi-finished product in the range of 0.1 - 0.5% as Thompson taught flattening his substantially similar Al-Mg semi-finished, cold-rolled sheet by stretching at about 0.5%, providing motivation to perform such a process to achieve the benefits of a flattened Al-Mg sheet.

With respect to either Neutjens or Dunbar, it would have furthermore been obvious to one of ordinary skill in Al-Mg alloy sheet processing, at the time of the invention, to select any portion of the claimed ranges of alloying components and processing parameters, including the claimed ranges, from the overlapping ranges disclosed in Neutjens and Dunbar because both Neutjens and Dunbar find that the prior art compositions and processing methods in the entire disclosed ranges of composition

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and processing parameters have a suitable utility and the normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969). From MPEP § 2144.05: In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). In addition, "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). Also see, *In re Geisler* 43 USPQ 2d 1365 (Fed. Cir. 1997) and *In re Malagari*, 182 USPQ 549, 554 (CCPA 1974).

Conclusion

-- Claim 4 (All elected) is rejected

-- No claims are allowed

The rejections above rely on the references for all the teachings expressed in the text of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the texts of the references. To emphasize certain aspects of the prior art, only specific portions of the texts have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

All recited limitations in the instant claims have been met by the rejections as set forth above. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shevin whose telephone number is (571) 270-3588 and fax number is (571) 270-4588. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark L. Shevin/

December 19th, 2009
10-551,563

/George Wyszomierski/
Primary Examiner
Art Unit 1793